Section 1
1998 Crashes, Injury Crashes and Fatal Crashes

TABLES

FIGURES

Utah Crashes 1968 - 1998

From 1968 to 1998, over 1.3 million crashes occurred in Utah with nearly half a million of the crashes involving injuries and 8,469 involving fatalities. Table 1.01 shows the Utah crash rates have decreased significantly over the past 30 years. The highest crash rate occurred in 1968 at 623.4 crashes per 100 million vehicle miles traveled (MVMT). The lowest crash rate occurred in 1998 at 254.6 crashes per 100 MVMT. The injury crash rate per 100 MVMT high was in 1970 (175.5) and the low was in 1991 (89.4). The fatal crash rate per 100 MVMT high occurred in 1968 (4.7) and the low occurred in 1992 (1.4). When comparing years, rates should be used rather than the crude number of events because they provide a more accurate picture of trends over time. The rates used in this report are based on the annual vehicle miles traveled. The Utah Department of Transportation supplied the number of vehicle miles traveled each year.

There was a change in crash rates from 1997 to 1998. In 1998, the statewide crash rate per 100 million vehicle miles traveled was 254.6, a 5% decrease from the 1997 rate. The injury crash rate decreased substantially (a 12% decrease), while the fatal crash rate was unchanged from 1997 to 1998.

Some of these changes may be due to crash reporting system as well as other factors. During the time period 1968 to 1998 the crash reporting criteria changed; most notably, 1997 was the first year to exclude crashes occurring on private property. This change probably accounts for the decrease in crashes and injury crashes from the previous year, but does not impact the reporting of fatal crashes. Additionally, improvements in the medical system may reduce fatalities but increase the number of injuries reported as more lives are saved. Increased use of seatbelts; improvements in the biomechanical design of roadways and vehicles; legislation, such as speed limits, drunk driving laws and other injury prevention strategies have decreased crashes and the severity of crash injuries.

Table 1.01 Utah Crashes, Injury Crashes and Fatal Crashes 1968-1998

Year	Million Vehicle Miles	Total Crashes	Injury Crashes	Fatal Crashes	Crash Rate per 100 Million Vehicle Miles	Injury Crash Rate Per 100 Million Vehicle Miles	Fatal Crash Rate per 100 Million Vehicle Miles
1968	5,539	34,532	9,550	258	623.4	172.4	4.7
1969	5,802	34,766	9,850	251	599.2	169.8	4.3
1970	6,108	35,166	10,722	276	575.7	175.5	4.5
1971	6,544	39,108	11,399	280	597.6	174.2	4.3
1972	6,969	39,856	11,630	312	571.9	166.9	4.5
1973	7,274	38,234	11,710	304	525.6	161.0	4.2
1974	7,457	31,401	10,560	204	421.1	141.6	2.7
1975	7,942	36,426	11,441	245	458.7	144.1	3.1
1976	8,420	34,345	11,685	225	407.9	138.8	2.7
1977	9,054	38,524	12,652	310	425.5	139.7	3.4
1978	9,826	42,684	13,423	315	434.4	136.6	3.2
1979	9,811	40,468	13,449	287	412.5	137.1	2.9
1980	10,645	33,582	11,701	292	315.5	109.9	2.7
1981	10,733	35,989	11,824	321	335.3	110.2	3.0
1982	10,947	38,192	11,504	263	348.9	105.1	2.4
1983	11,228	40,989	12,317	253	365.1	109.7	2.3
1984	11,642	47,489	13,477	274	407.9	115.8	2.4
1985	12,035	47,871	13,917	270	397.8	115.6	2.2
1986	12,253	46,690	13,988	276	381.0	114.2	2.3
1987	12,679	47,256	13,599	271	372.7	107.3	2.1
1988	13,263	49,249	13,377	258	371.3	100.9	1.9
1989	13,915	51,320	13,941	269	368.8	100.2	1.9
1990	14,646	52,691	14,632	236	359.8	99.9	1.6
1991	15,390	47,435	13,763	229	308.2	89.4	1.5
1992	16,263	50,660	15,665	235	311.5	96.3	1.4
1993	17,055	55,704	17,088	259	326.6	100.2	1.5
1994	18,080	59,272	18,726	303	327.8	103.6	1.7
1995	18,786	57,644	19,828	284	306.8	105.5	1.5
1996	19,433	61,505	20,988	292	316.5	108.0	1.5
1997	20,408	54,952	21,131	309	269.3	103.5	1.5
1998	21,237	54,072	19,427	308	254.6	91.5	1.5

Injury and Fatal Crashes Trends 1968 - 1998

Figures 1.01 and 1.02 reflect the trends in injury and fatal crash rates per 100 million vehicle miles traveled (MVMT) from 1968 to 1998. Both injury and fatal crash rates have been steadily decreasing. The injury crash rates were highest in the late sixties. A large decrease occurred in 1980 and there was a slight increase between 1990 to 1996. The fatal crash rates have markedly decreased from 4.7 per 100 MVMT in 1968 to 1.5 per 100 MVMT in 1998. The biggest decrease in fatal crash rates occurred in 1973, the same year the speed limit was lowered to 55 MPH.

Figure 1.01 Injury Crash Rates per Miles Traveled, 1968 - 1998

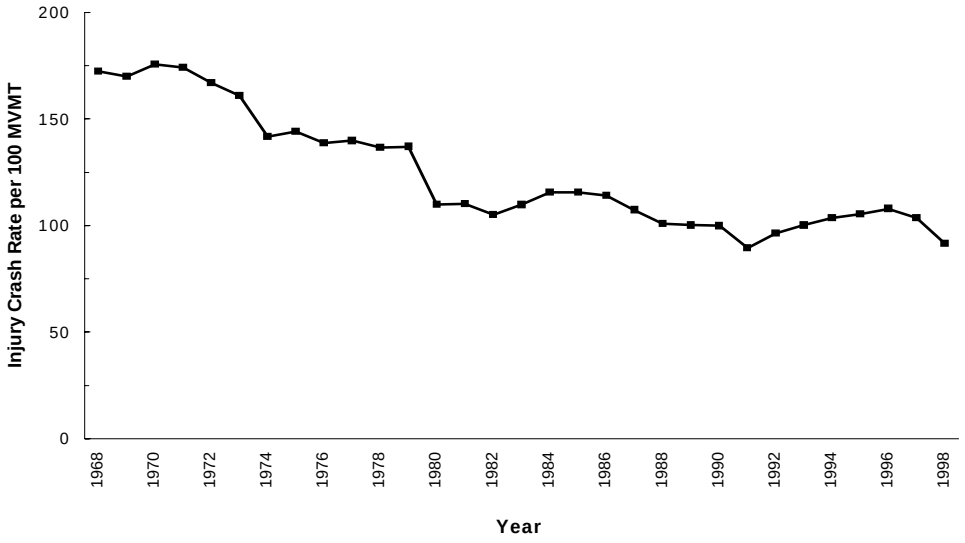
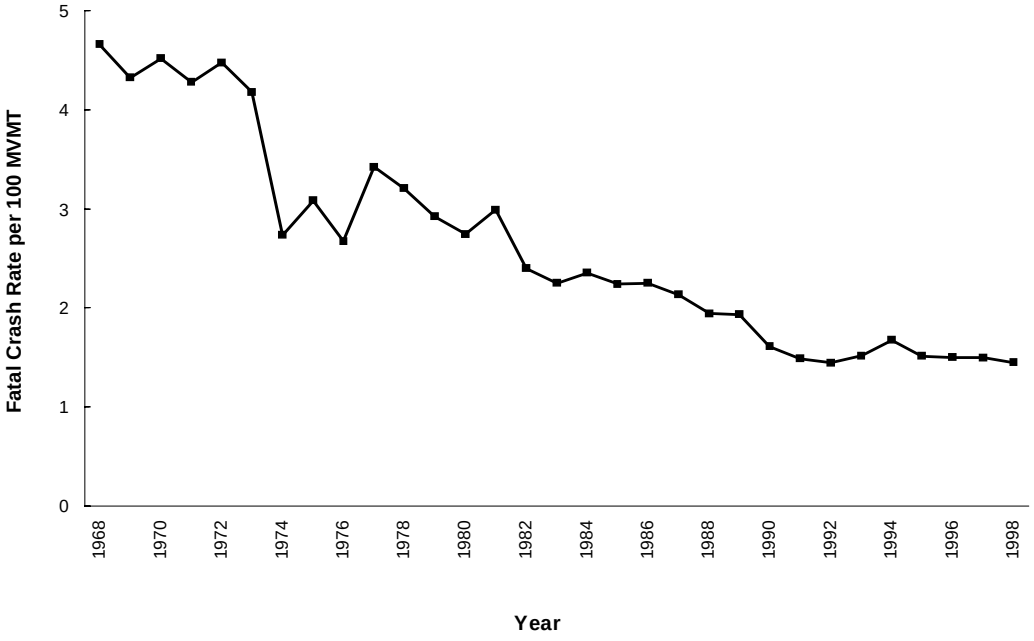


Figure 1.02 Fatal Crash Rates per Miles Traveled, 1968 - 1998



1998 Crash Severity

Figure 1.03 Severity of Crashes as Reported by Police, 1998 (n=54,072)

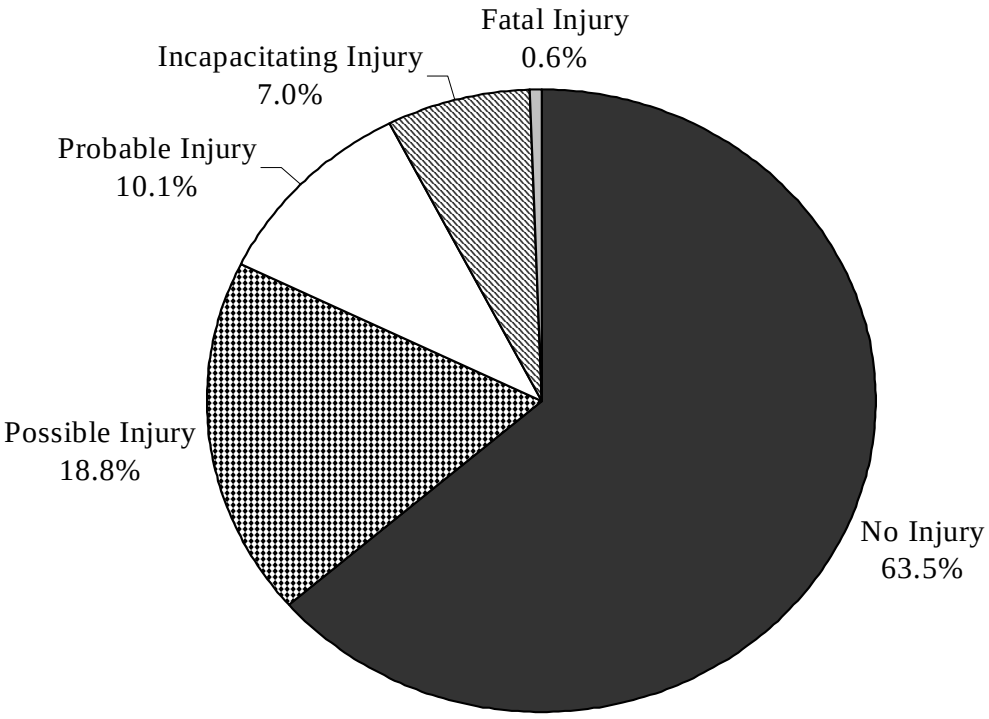


Figure 1.03 shows the breakdown of crash severity as recorded by the police. The majority (63%) of crashes resulted in property damage only. Thirty-seven percent (37%) of crashes resulted in some level of injury. Fatal crashes represented only 1% of crashes in Utah.

1998 Crashes by County

Figure 1.04 depicts the number of injury and fatal crashes for each county in Utah, while Table 1.02 shows the rates of crashes, injury crashes and fatal crashes for each county. Two different rates are given in Table 1.02, one based on population of the county and the other on the miles traveled in the county. The rate of crashes per miles traveled provides a more accurate reflection of the motor vehicle crash risk. Cases where the crash rate per population is higher than the rate per miles traveled may indicate that the county has a large number of non-county drivers. Salt Lake, Weber and Utah had the highest crash and injury crash rates per mile traveled, while Piute, Wayne and Rich counties had the highest rates of fatal crashes.

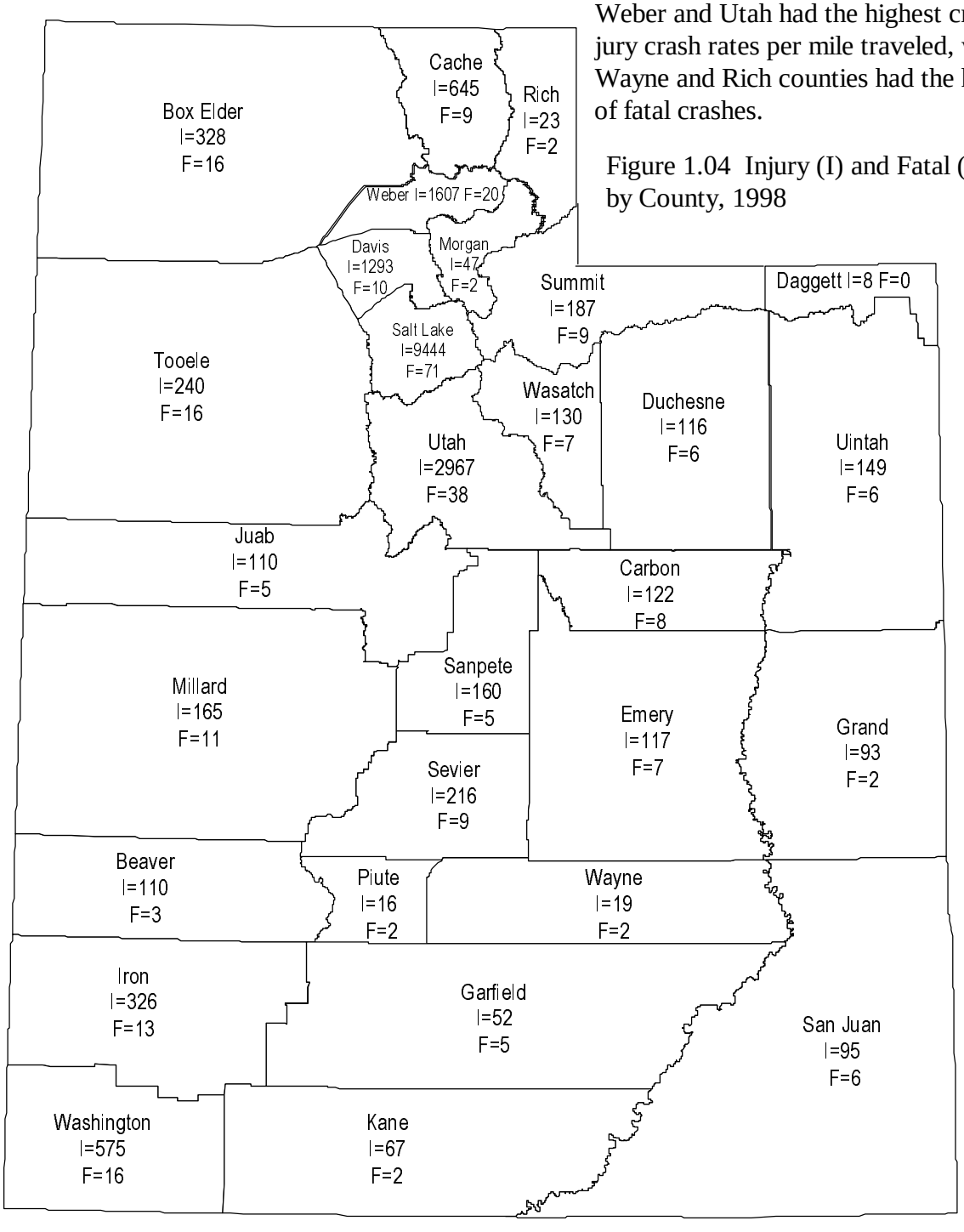


Figure 1.04 Injury (I) and Fatal (F) Crashes by County, 1998

Table 1.02 Crashes, Injury Crashes and Fatal Crashes by County, 1998

County	Crashes #	Crashes Rate per 10,000 Population	Crashes Rate per MVMT	Injury Crashes #	Injury Crashes Rate per 10,000 Population	Injury Crashes Rate per 10 MVMT	Fatal Crashes #	Fatal Crashes Rate per 10,000 Population	Fatal Crashes Rate per 100 MVMT
Beaver	315	495.4	1.6	110	173.0	5.5	3	4.7	1.5
Box Elder	931	225.4	1.1	328	79.4	3.8	16	3.9	1.9
Cache	2,047	226.8	2.8	645	71.5	8.7	9	1.0	1.2
Carbon	388	175.2	1.2	122	55.1	3.6	8	3.6	2.4
Daggett	50	600.2	2.2	8	96.0	3.5	0	0.0	0.0
Davis	4,035	176.9	2.1	1,293	56.7	6.6	10	0.4	0.5
Duchesne	358	250.9	2.0	116	81.3	6.4	6	4.2	3.3
Emery	328	296.6	1.0	117	105.8	3.6	7	6.3	2.1
Garfield	147	316.7	1.2	52	112.0	4.1	5	10.8	4.0
Grand	244	245.1	0.9	93	93.4	3.6	2	2.0	0.8
Iron	961	301.7	1.8	326	102.3	6.1	13	4.1	3.0
Juab	305	386.9	1.0	110	139.5	3.4	5	6.3	1.6
Kane	258	363.1	2.1	67	94.3	5.6	2	2.8	1.7
Millard	416	332.4	1.0	165	131.8	4.1	11	8.8	2.8
Morgan	157	229.0	1.4	47	68.6	4.1	2	2.9	1.8
Piute	62	383.4	2.0	16	98.9	5.3	2	12.4	6.6
Rich	66	354.6	1.5	23	123.6	5.1	2	10.7	4.5
Salt Lake	24,770	291.4	3.5	9,444	111.1	13.4	71	0.8	1.0
San Juan	285	213.8	1.1	95	71.3	3.5	6	4.5	2.2
Sanpete	471	220.6	2.1	160	74.9	7.2	5	2.3	2.3
Sevier	638	338.5	1.8	216	114.6	6.1	9	4.8	2.5
Summit	841	328.8	1.5	187	73.1	3.3	9	3.5	1.6
Tooele	701	205.7	1.1	240	70.4	3.8	16	4.7	2.5
Uintah	513	209.4	1.8	149	60.8	5.3	6	2.4	2.1
Utah	8,202	245.7	3.0	2,967	88.9	10.8	38	1.1	1.4
Wasatch	487	357.4	2.2	130	95.4	5.8	7	5.1	3.1
Washington	1,690	211.7	2.0	575	72.0	6.8	16	2.0	1.9
Wayne	67	265.9	1.8	19	75.4	5.1	2	7.9	5.4
Weber	4,339	235.4	3.1	1,607	87.2	11.5	20	1.1	1.4
Statewide	54,072	257.4	2.5	19,427	92.5	9.1	308	1.5	1.5

1998 Crashes by City

The crash rates per population for cities with over 200 crashes in 1998 are shown in Table 1.03. While, South Salt Lake had the highest rate of crashes and injury crashes, Ogden had the highest rate of fatal crashes.

Table 1.03 Crash, Injury Crash and Fatal Crash Rates of Cities with More than 200 Crashes, 1998

City	Crashes #	Crashes Rate Per 100,000 Population	Injury Crashes #	Injury Crashes Rate Per 100,000 Population	Fatal Crashes #	Fatal Crashes Rate Per 100,000 Population
Salt Lake City	4,013	2,269.0	1,006	568.8	13	7.4
West Valley City	2,988	2,924.7	528	516.8	5	4.9
Provo	2,543	2,507.2	423	417.1	5	4.9
Sandy	2,260	2,302.2	275	280.1	6	6.1
Orem	2,177	2,671.2	296	363.2	6	7.4
Ogden	2,117	3,188.2	359	540.6	12	18.1
Murray	2,005	5,824.8	235	682.7	4	11.6
South Salt Lake	1,322	7,039.0	166	883.9	0	0.0
Logan	1,113	2,618.5	155	364.7	0	0.0
West Jordan	1,090	1,799.5	193	318.6	2	3.3
St. George	1,040	2,227.8	149	319.2	5	10.7
Layton	945	1,791.7	146	276.8	2	3.8
Taylorsville	849	1,463.8	114	196.6	2	3.4
Draper	783	3,436.5	111	487.2	1	4.4
Bountiful	634	1,580.3	90	224.3	0	0.0
Midvale	616	2,209.7	78	279.8	1	3.6
Clearfield	516	2,237.5	68	294.9	1	4.3
Roy	463	1,505.9	64	208.2	0	0.0
Cedar City	436	2,060.6	63	297.7	1	4.7
American Fork	397	1,905.8	68	326.4	2	9.6
South Jordan	370	1,449.7	47	184.1	0	0.0
Riverdale	365	5,080.0	58	807.2	0	0.0
North Salt Lake	352	4,371.0	30	372.5	0	0.0
Riverton	322	1,316.4	45	184.0	1	4.1
Springville	313	1,872.9	53	317.1	1	6.0
Spanish Fork	303	1,862.1	59	362.6	0	0.0
Pleasant Grove	272	1,367.2	49	246.3	0	0.0
Centerville	265	1,744.5	44	289.6	0	0.0
South Ogden	260	1,782.3	44	301.6	1	6.9
Lindon	235	3,631.6	37	571.8	1	15.5
Park City	225	3,519.5	18	281.6	0	0.0
Farmington	205	1,839.9	31	278.2	2	18.0

1998 Crash Times

Crashes and injury crashes were more likely to occur between 3 p.m. and 5 p.m. with a peak at 5 p.m. (evening rush hour). Fatal crashes followed a different pattern with the peak occurring at 4 p.m., but a high percentage also occurred in late evening (7 p.m. - 11 p.m.) and early morning (6 a.m. - 7 a.m.) hours.

December had the highest rate of crashes and injury crashes per day while summer months (July to September) had the highest rates of fatal crashes per day (Table 1.05). In fact, 38% of all fatal crashes occurred between Memorial Day and Labor Day. The fatal crash rate per day was 1.0 between Memorial Day and Labor Day, which was slightly larger than the yearly fatal crash rate per day of 0.8.

Table 1.04 Hour of Crashes, Injury Crashes and Fatal Crashes, 1998

	Crashes		Injury Crashes		Fatal Crashes	
Hour	#	%	#	%	#	%
12 a.m.	702	1.3%	277	1.4%	5	1.6%
1 a.m.	644	1.2%	250	1.3%	9	2.9%
2 a.m.	462	0.9%	186	1.0%	3	1.0%
3 a.m.	318	0.6%	113	0.6%	5	1.6%
4 a.m.	331	0.6%	116	0.6%	3	1.0%
5 a.m.	559	1.0%	183	0.9%	5	1.6%
6 a.m.	1,229	2.3%	443	2.3%	15	4.9%
7 a.m.	2,516	4.7%	837	4.3%	17	5.5%
8 a.m.	2,437	4.5%	839	4.3%	10	3.2%
9 a.m.	2,052	3.8%	726	3.7%	10	3.2%
10 a.m.	2,205	4.1%	818	4.2%	10	3.2%
11 a.m.	2,694	5.0%	946	4.9%	13	4.2%
12 p.m.	3,293	6.1%	1,153	5.9%	11	3.6%
1 p.m.	3,360	6.2%	1,259	6.5%	21	6.8%
2 p.m.	3,779	7.0%	1,411	7.3%	16	5.2%
3 p.m.	4,318	8.0%	1,587	8.2%	20	6.5%
4 p.m.	4,587	8.5%	1,612	8.3%	25	8.1%
5 p.m.	5,127	9.5%	1,841	9.5%	15	4.9%
6 p.m.	3,907	7.2%	1,398	7.2%	17	5.5%
7 p.m.	2,728	5.0%	972	5.0%	20	6.5%
8 p.m.	2,080	3.8%	732	3.8%	18	5.8%
9 p.m.	2,019	3.7%	693	3.6%	14	4.5%
10 p.m.	1,543	2.9%	592	3.0%	17	5.5%
11 p.m.	1,182	2.2%	443	2.3%	9	2.9%
Grand Total	54,072	100.0%	19,427	100.0%	308	100.0%

Figure 1.05 Hour of Injury Crashes and Fatal Crashes, 1998 (See Table 1.04 for values)

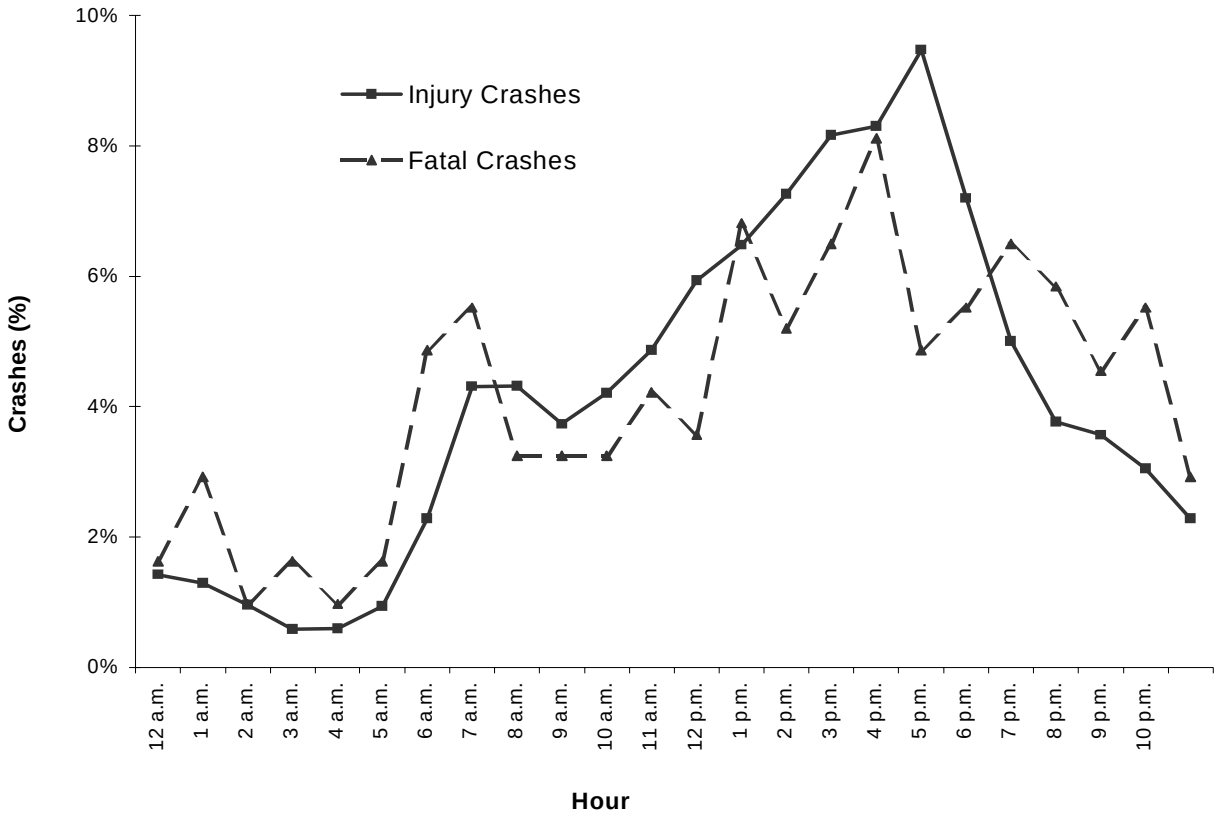
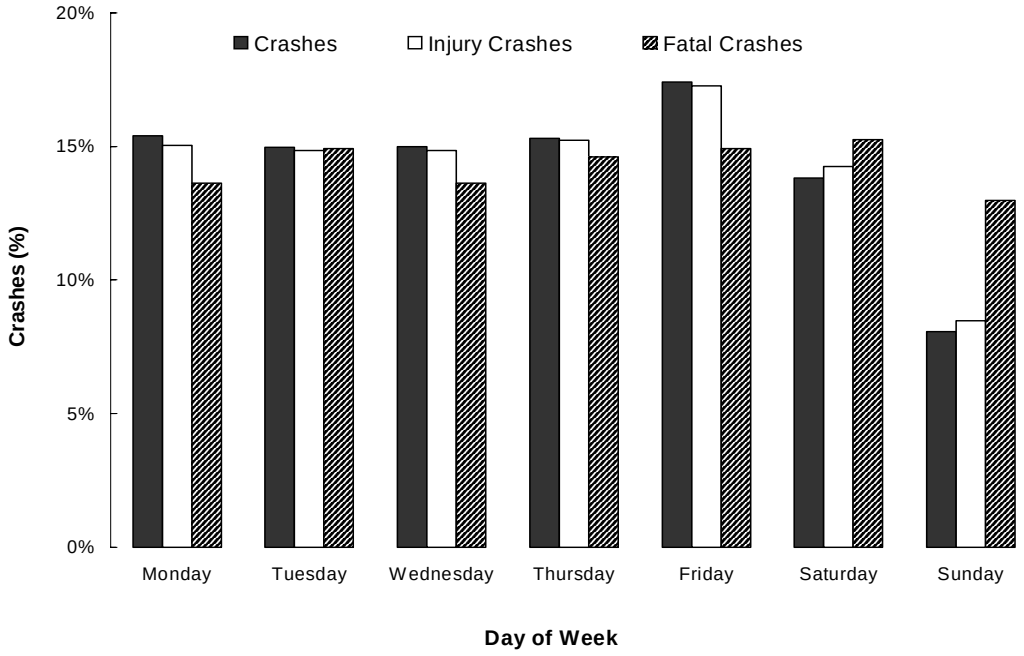


Table 1.05 Month of Crashes, Injury Crashes and Fatal Crashes, 1998

Crash Month	Crashes #	Crashes Rate per Day	Injury Crashes #	Injury Crashes Rate per Day	Fatal Crashes #	Fatal Crashes Rate per Day
January	4,380	141.3	1,447	46.7	23	0.7
February	4,438	158.5	1,454	51.9	21	0.8
March	4,071	131.3	1,468	47.4	17	0.5
April	4,108	136.9	1,512	50.4	21	0.7
May	4,163	134.3	1,597	51.5	24	0.8
June	4,376	145.9	1,650	55.0	24	0.8
July	4,570	147.4	1,783	57.5	38	1.2
August	4,565	147.3	1,759	56.7	34	1.1
September	4,629	154.3	1,736	57.9	39	1.3
October	4,798	154.8	1,705	55.0	28	0.9
November	4,384	146.1	1,509	50.3	23	0.7
December	5,590	180.3	1,807	58.3	16	0.5
Grand Total	54,072	148.1	19,427	53.2	308	0.8

Figure 1.06 shows that the highest percentage of crashes occurred on Friday. The highest percentage of fatal crashes occurred on Saturday. However, crashes occurring on Sundays were 1.6 times more likely to involve a fatality compared to crashes that occurred on other days of the week. The majority of Sunday fatal crashes occurred during the early morning hours. These crashes tended to be alcohol related which increases the likelihood for a fatality.

Figure 1.06 Day of Week for Crashes, Injury Crashes and Fatal Crashes, 1998 (See Table 1.06 for values)



Note: The above graph is based on percentage for the different crash categories. To read the above graph, look at one category across the groups. For example, look at only the white bars (i.e. injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 1.06 Day of Week for Crashes, Injury Crashes and Fatal Crashes, 1998

	Crashes		Injury Crashes		Fatal Crashes	
Day of Week	**#**	**%**	**#**	**%**	**#**	**%**
Monday	8,331	15.4%	2,924	15.1%	42	13.6%
Tuesday	8,094	15.0%	2,885	14.9%	46	14.9%
Wednesday	8,106	15.0%	2,888	14.9%	42	13.6%
Thursday	8,272	15.3%	2,959	15.2%	45	14.6%
Friday	9,421	17.4%	3,354	17.3%	46	14.9%
Saturday	7,479	13.8%	2,772	14.3%	47	15.3%
Sunday	4,369	8.1%	1,645	8.5%	40	13.0%
Grand Total	54,072	100.0%	19,427	100.0%	308	100.0%

Holiday Crashes 1996 - 1998

Table 1.07 shows the number of fatal crashes that occurred on holidays for the past three years. The number of days included in a holiday varied by year. When a holiday falls on Monday, the holiday begins at noon the Friday before the holiday and ends at midnight on the holiday. If a holiday does not fall on the weekend, the holiday begins at noon on the day before and ends on midnight the day after. Because of the differing lengths of holidays, the rate per day is provided and should be used to compare holidays by year. Holidays are a concern due to the increased motor vehicle travel, combined with other risk factors (e.g., alcohol and other drug impaired driving, fatigued driving). Thanksgiving was the holiday with the highest rate of fatal crashes for 1996 and 1998, while July 4th had the highest rate of fatal crashes per day in 1997.

Table 1.07 Fatal Crashes by Holiday, 1996 - 1998

	1996 Fatal Crashes		1997 Fatal Crashes		1998 Fatal Crashes	
Holiday	**#**	**Rate per day**	**#**	**Rate per day**	**#**	**Rate per day**
New Years	4	0.8	3	1.0	2	0.4
Memorial Day	2	0.4	3	0.8	2	0.5
July 4th	1	0.2	7	1.8	2	0.7
July 24th	3	0.6	1	0.3	2	0.5
Labor Day	4	0.8	4	1.0	4	1.0
Thanksgiving	4	1.0	6	1.2	10	2.5
Christmas	1	0.3	2	0.4	2	0.5
Total	19	0.6	26	0.9	24	0.9

1998 Crash Characteristics

Table 1.08 Types of Crashes, Injury Crashes and Fatal Crashes, 1998

Crash Type	Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Two Motor Vehicles	39,274	72.6%	13,615	70.1%	98	31.8%
Ran Off Roadway - To the Right	3,454	6.4%	1,494	7.7%	60	19.5%
Motor Vehicle and Fixed Object	2,242	4.1%	684	3.5%	14	4.5%
Motor Vehicle and Wild Animal	2,197	4.1%	146	0.8%	1	0.3%
Ran Off Roadway - To the Left	1,753	3.2%	784	4.0%	33	10.7%
Other Non-Collision	1,651	3.1%	521	2.7%	8	2.6%
Motor Vehicle and Bicycle	804	1.5%	728	3.7%	9	2.9%
Motor Vehicle and Pedestrian	748	1.4%	679	3.5%	41	13.3%
Ran Off Roadway Through Median	627	1.2%	316	1.6%	31	10.1%
Motor Vehicle and Other Object	452	0.8%	96	0.5%	2	0.6%
Motor Vehicle and Domestic Animal	436	0.8%	102	0.5%	1	0.3%
Overturned in Roadway	407	0.8%	254	1.3%	6	1.9%
Motor Vehicle and Train	27	0.0%	8	0.0%	4	1.3%
Grand Total	54,072	100.0%	19,427	100.0%	308	100.0%

Crashes involving two motor vehicles represented the majority of crashes (73%). Pedestrian-motor vehicle crashes represented 1% of all crashes, but accounted for 13% of fatal crashes resulting in almost a 10-fold increased risk of a fatality. When a vehicle ran off the roadway there was a 4-fold increased risk of a fatality.

Table 1.09 Urban / Rural Location of Crashes, Injury Crashes and Fatal Crashes, 1998

Urban / Rural Location	Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	9,521	17.6%	3,136	16.1%	156	50.6%
Small Urban - 5,000 to 49,999	2,406	4.4%	742	3.8%	14	4.5%
Moderate Urban - 50,000 to 199,999	1,279	2.4%	424	2.2%	6	1.9%
Large Urban - 200,000 or More	36,735	67.9%	13,896	71.5%	104	33.8%
Missing	4,131	7.6%	1,229	6.3%	28	9.1%
Grand Total	54,072	100.0%	19,427	100.0%	308	100.0%

Not surprisingly the majority of crashes (68%) occurred in urban areas. However, the majority of fatal crashes (51%) occurred in rural areas. In fact, rural crashes were 5 times more likely to result in a fatality than other crashes.

Table 1.10 Collision Description of Crashes, Injury Crashes and Fatal Crashes, 1998

Collision Description	Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Rear End	15,318	28.3%	5,752	29.6%	12	3.9%
Broadside	13,293	24.6%	5,841	30.1%	47	15.3%
Other	8,243	15.2%	1,720	8.9%	23	7.5%
Multi-vehicle Other	7,922	14.7%	1,473	7.6%	13	4.2%
Side Swipe	3,431	6.3%	738	3.8%	22	7.1%
Single Vehicle Rollover	3,346	6.2%	2,070	10.7%	105	34.1%
Pedestrian/Bicyclist Crash	1,552	2.9%	1,407	7.2%	50	16.2%
Single Vehicle Fixed Object	533	1.0%	183	0.9%	4	1.3%
Head-on	408	0.8%	232	1.2%	30	9.7%
Single Vehicle Other	26	0.0%	11	0.1%	2	0.6%
Grand Total	54,072	100.0%	19,427	100.0%	308	100.0%

The leading collision types were a rear end (28%) and a broadside (25%). These were also the leading injury crash types. The leading fatal collision type was a single vehicle rollover (34%), followed by pedestrian/bicyclist crashes (16%) and broadsides (15%). Head-on collisions were 15 times more likely to result in a fatality than other collisions. Single vehicle rollovers were 8 times more likely to result in a fatality than other collisions.

Table 1.11 Type of Vehicles Involved in Crashes, Injury Crashes and Fatal Crashes, 1998

Vehicle Type	Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	56,900	56.2%	21,523	58.0%	211	43.5%
Pickup Truck / Vans	38,502	38.0%	13,377	36.1%	198	40.3%
Large Truck	3,512	3.5%	1,041	2.8%	55	8.9%
Other	1,602	1.6%	598	1.6%	11	46.2%
Motorcycle	601	0.6%	517	1.4%	15	4.6%
School Bus	140	0.1%	37	0.1%	0	0.0%
Grand Total	101,257	100.0%	37,093	100.0%	490	100.0%

The majority of vehicles involved in Utah crashes were passenger cars (56%). While motorcycles were less than 1% of vehicles involved in crashes, they represented nearly 5% of vehicles in fatal crashes. Crashes involving a motorcycle were 5 times more likely to be fatal than crashes involving other vehicles. Crashes involving a large truck were 4 times more likely to be fatal than crashes involving other vehicles.

1998 Crash Violations and Contributing Factors

Table 1.12 Violations for Crashes, Injury Crashes and Fatal Crashes, 1998

Violations	Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Failure to Yield Right of Way	7,004	22.7%	2,911	24.0%	4	10.5%
Improper Lookout	5,644	18.3%	2,085	17.2%	3	7.9%
Following Too Close	4,522	14.7%	1,638	13.5%	1	2.6%
All Other Moving Violations	2,629	8.5%	1,028	8.5%	4	10.5%
Speeding	2,312	7.5%	857	7.1%	7	18.4%
Red Light	1,542	5.0%	838	6.9%	4	10.5%
Improper Turn	1,367	4.4%	495	4.1%	2	5.3%
Driving Under the Influence	1,363	4.4%	778	6.4%	6	15.8%
Negligent Collision	1,311	4.3%	495	4.1%	1	2.6%
Improper Lane Change	805	2.6%	170	1.4%	0	0.0%
Stop Sign	535	1.7%	303	2.5%	0	0.0%
Improper Passing	436	1.4%	125	1.0%	1	2.6%
Improper Backing	391	1.3%	38	0.3%	0	0.0%
Hit and Run	312	1.0%	94	0.8%	0	0.0%
Wrong Side of Road	263	0.9%	100	0.8%	1	2.6%
Reckless Driving	222	0.7%	114	0.9%	0	0.0%
Improper Start and Stop	131	0.4%	41	0.3%	0	0.0%
Wrong Way on One Way Street	7	0.0%	2	0.0%	0	0.0%
Vehicle Homicide	4	0.0%	0	0.0%	4	10.5%
Grand Total	30,800	100.0%	12,112	100.0%	38	100.0%

Officers at the scene cited 31.4% of drivers involved in a crash for a traffic violation. The leading violation for all crashes was "failure to yield right of way" (23%). The top violations in fatal crashes were "speeding" (18%) and "driving under the influence" (16%). Drivers cited for driving under the influence were 4 times more likely to be involved in a fatal crash than drivers cited for other violations. Drivers cited for speeding were 3 times more likely to be involved in a fatal crash than drivers cited for other violations.

The factors contributing to crashes in 1998 are listed in Table 1.13. These factors were coded by the scene officers for each vehicle involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The leading contributing factors recorded for all crashes and injury crashes were "improper lookout" (24% and 22%), while "speed too fast" (22%) was the leading contributing factor recorded for fatal crashes. If you combined "asleep" and "fatigued" these contributing factors would be the second leading cause of fatal crashes at 7.4% and "driving under the influence", "had been drinking" and "under the influence of drugs" would be the third leading cause at 6.8%.

Table 1.13 Contributing Factors of Crashes, Injury Crashes and Fatal Crashes, 1998

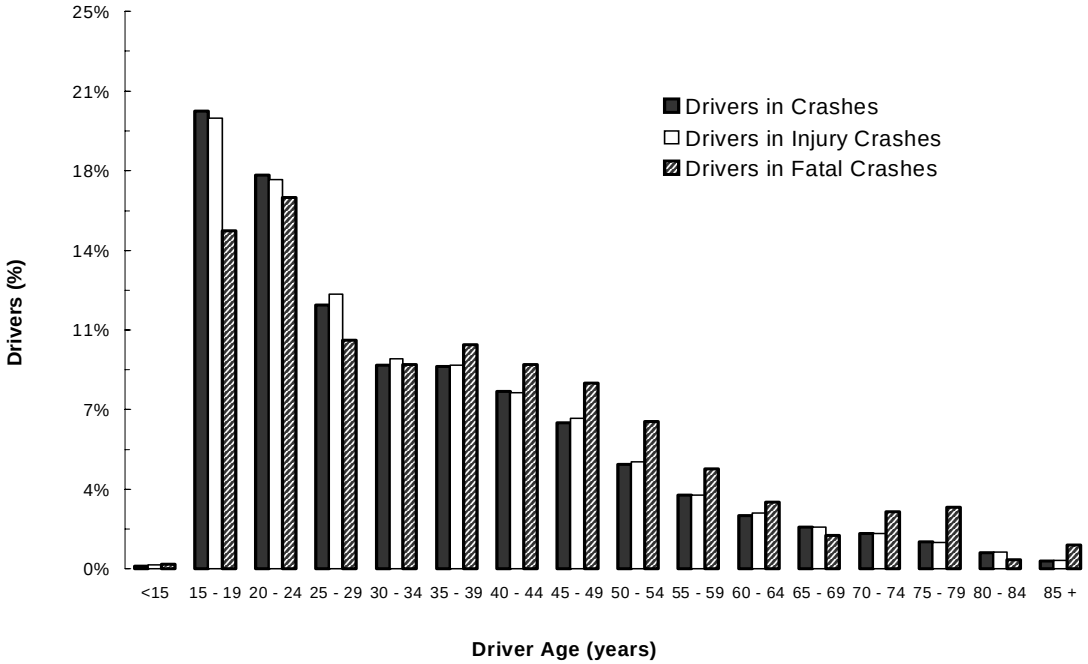
Contributing Factors	Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	15,597	23.6%	5,505	22.3%	47	11.0%
Failed to Yield the Right of Way	10,957	16.6%	4,414	17.9%	29	6.8%
Speed Too Fast	7,951	12.0%	3,042	12.3%	93	21.7%
Following Too Closely	7,612	11.5%	2,719	11.0%	4	0.9%
Other Improper Driving	5,421	8.2%	2,032	8.2%	61	14.3%
Improper Turn	2,583	3.9%	785	3.2%	12	2.8%
Hit and Run	2,488	3.8%	676	2.7%	3	0.7%
Disregarded Traffic Signal	2,117	3.2%	1,133	4.6%	9	2.1%
Driving Under the Influence	1,274	1.9%	723	2.9%	12	2.8%
Improper Overtaking	1,260	1.9%	367	1.5%	9	2.1%
Non-Contact Vehicle Involved	1,132	1.7%	376	1.5%	15	3.5%
Drove Left of Center	1,108	1.7%	435	1.8%	41	9.6%
Asleep	859	1.3%	451	1.8%	25	5.8%
Passed Stop Sign	779	1.2%	419	1.7%	5	1.2%
Improper Backing	726	1.1%	55	0.2%	2	0.5%
Had Been Drinking	454	0.7%	253	1.0%	15	3.5%
Other Defective Condition	376	0.6%	114	0.5%	3	0.7%
Brakes Defective	359	0.5%	143	0.6%	2	0.5%
Fatigued	334	0.5%	183	0.7%	7	1.6%
Improper Parking	300	0.5%	80	0.3%	3	0.7%
Tires Defective	272	0.4%	98	0.4%	5	1.2%
Ill	197	0.3%	123	0.5%	2	0.5%
Cargo Loss or Shift	190	0.3%	43	0.2%	2	0.5%
Failed to Signal	171	0.3%	50	0.2%	0	0.0%
Non-collision Fire	155	0.2%	0	0.0%	1	0.2%
Jackknife	143	0.2%	38	0.2%	2	0.5%
Vehicle Rolling in Traffic Lane	121	0.2%	31	0.1%	0	0.0%
Down Hill Runaway	118	0.2%	21	0.1%	1	0.2%
Separation of Units	108	0.2%	14	0.1%	4	0.9%
Wrong Side of Road	103	0.2%	47	0.2%	0	0.0%
Windshield Not Clear	96	0.1%	37	0.2%	0	0.0%
Stolen	95	0.1%	34	0.1%	0	0.0%
Other Lights or Reflecting/Defective	93	0.1%	36	0.1%	4	0.9%
Under the Influence of Drugs	90	0.1%	47	0.2%	2	0.5%
Headlights Insufficient or Out	87	0.1%	39	0.2%	1	0.2%
Towed Vehicle	59	0.1%	13	0.1%	0	0.0%
Headlights Glaring	46	0.1%	12	0.0%	1	0.2%
Steering Mechanism Defective	44	0.1%	21	0.1%	1	0.2%
Immersion	36	0.1%	6	0.0%	1	0.2%
Eyesight Defective Uncorrected	26	0.0%	13	0.1%	0	0.0%
Explosion or Fire	23	0.0%	2	0.0%	0	0.0%
Collision Fire	14	0.0%	7	0.0%	4	0.9%
Wrong Way on One Way Street	10	0.0%	3	0.0%	0	0.0%
Grand Total	65,984	100.0%	24,640	100.0%	428	100.0%

Drivers Involved in 1998 Crashes

Figure 1.07 shows the age of drivers involved in crashes for 1998. The age distribution of drivers involved in all crashes and injury crashes were similar; drivers between the age of 15 to 19 years represented the highest percentage of drivers involved in these crashes. The age distribution of drivers involved in fatal crashes was different; 20 to 24 year old drivers represented the largest percentage of drivers involved in fatal crashes.

Similar trends in the age of drivers involved in crashes are illustrated in Figure 1.08 which shows the crash rate per licensed drivers. The number of licensed drivers was provided by the Utah Drivers License Division. Drivers aged 16 to 18 years experienced high crash and injury crash rates. Drivers aged 19 to 20 years had the highest rates of fatal crashes, followed by drivers aged 16 to 18 years.

Figure 1.07 Age of Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1998 (See Table 1.14 for values)

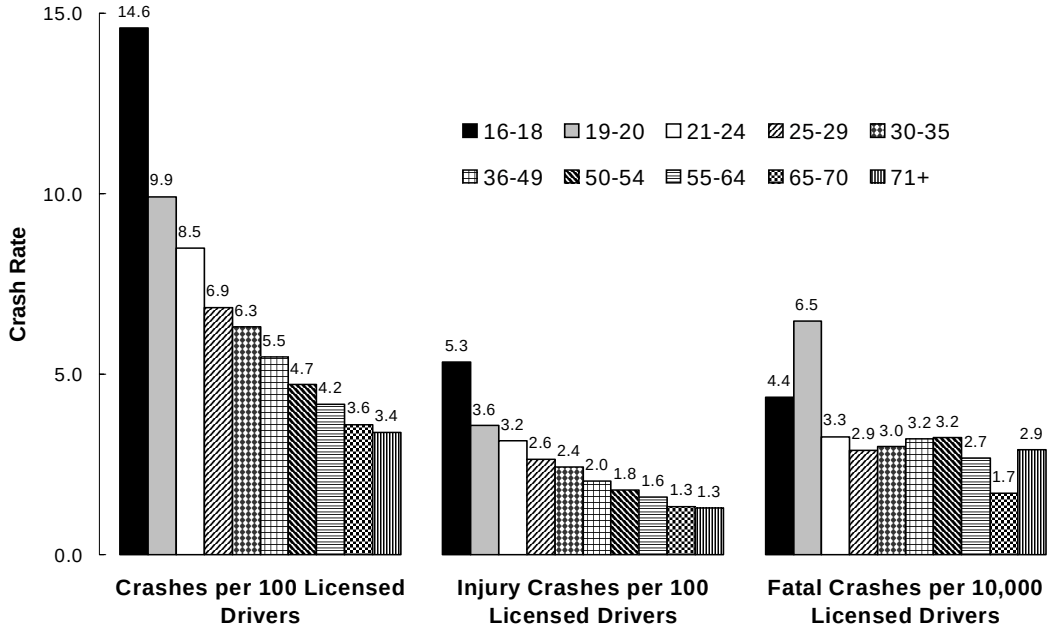


Note: The above graph is based on percentage for the different crash categories. To read the above graph, look at one category across the groups. For example, look at only the white bars (i.e. drivers in injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Table 1.14 Age of Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1998

	Crashes		Injury Crashes		Fatal Crashes	
Driver's Age	**#**	**%**	**#**	**%**	**#**	**%**
<15	124	0.1%	66	0.2%	1	0.2%
15 - 19	19,702	20.1%	7,210	19.8%	71	14.9%
20 - 24	16,960	17.3%	6,228	17.1%	78	16.3%
25 - 29	11,377	11.6%	4,393	12.1%	48	10.0%
30 - 34	8,756	8.9%	3,358	9.2%	43	9.0%
35 - 39	8,727	8.9%	3,261	9.0%	47	9.8%
40 - 44	7,633	7.8%	2,816	7.7%	43	9.0%
45 - 49	6,294	6.4%	2,407	6.6%	39	8.2%
50 - 54	4,501	4.6%	1,711	4.7%	31	6.5%
55 - 59	3,189	3.3%	1,186	3.3%	21	4.4%
60 - 64	2,280	2.3%	897	2.5%	14	2.9%
65 - 69	1,800	1.8%	670	1.8%	7	1.5%
70 - 74	1,523	1.6%	570	1.6%	12	2.5%
75 - 79	1,171	1.2%	425	1.2%	13	2.7%
80 - 84	683	0.7%	270	0.7%	2	0.4%
85 +	322	0.3%	132	0.4%	5	1.0%
Missing	2,917	3.0%	783	2.2%	3	0.6%
Grand Total	97,959	100.0%	36,383	100.0%	478	100.0%

Figure 1.08 Age of Driver by Crash Rate per Licensed Driver, 1998



Males represented 58% of all drivers involved in a crash, and 72% of drivers involved in fatal crashes. Females accounted for 40% of drivers involved in a crash, but they represented a slightly higher percentage of drivers in injury crashes at 43%.

Table 1.15 Gender of Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1998

	Crashes		Injury Crashes		Fatal Crashes	
Driver's Gender	**#**	**%**	**#**	**%**	**#**	**%**
Female	38,955	39.8%	15,526	42.7%	137	27.4%
Male	56,990	58.2%	20,399	56.1%	339	71.9%
Missing	2,014	2.1%	458	1.3%	2	0.6%
Grand Total	97,959	100.0%	36,383	100.0%	478	100.0%

Out of State Drivers Involved in Utah 1998 Crashes

Table 1.16 State of Licensure for Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1998

Drivers License State	Crashes #	Crashes %	Injury Crashes #	Injury Crashes %	Fatal Crashes #	Fatal Crashes %
Out of State	8,998	9.2%	3,287	9.0%	80	18.9%
Utah	88,780	90.6%	33,038	90.8%	396	81.1%
Missing	181	0.2%	58	0.2%	2	0.0%
Grand Total	97,959	100.0%	36,383	100.0%	478	100.0%

Table 1.16 shows the state of licensure for drivers involved in Utah crashes. While out of state licensed drivers accounted for 9% of drivers involved in crashes, they represented 19% of drivers involved in fatal crashes. This may be due in part to fatigued driving on out-of-state trips. There were several counties that had a disproportional amount of out of state drivers (Table 1.17). Most notably, Kane (43%), San Juan (37%), Daggett (37%), and Grand (37%) had a high proportion of out of state licensed drivers involved in crashes. These drivers may place an undue burden on the residents and medical services in these counties.

Table 1.17 State of Licensure for Drivers by County, 1998

County	Total Drivers	Out of State Drivers #	Out of State Drivers %
Beaver	403	124	30.8%
Box Elder	1,308	235	18.0%
Cache	3,747	405	10.8%
Carbon	579	52	9.0%
Daggett	54	20	37.0%
Davis	7,622	483	6.3%
Duchesne	463	28	6.0%
Emery	404	118	29.2%
Garfield	173	60	34.7%
Grand	326	119	36.5%
Iron	1,471	328	22.3%
Juab	375	68	18.1%
Kane	325	138	42.5%
Millard	503	148	29.4%
Morgan	197	43	21.8%
Piute	63	11	17.5%
Rich	88	16	18.2%
Salt Lake	47,622	2,981	6.3%
San Juan	334	125	37.4%
Sanpete	691	24	3.5%
Sevier	825	243	29.5%
Summit	1,224	292	23.9%
Tooele	1,025	140	13.7%
Uintah	785	59	7.5%
Utah	15,171	1,709	11.3%
Wasatch	691	75	10.9%
Washington	3,051	417	13.7%
Wayne	77	15	19.5%
Weber	8,362	522	6.2%
Grand Total	97,959	8,998	9.2%